

## Appendix A.

173. (amended) The method of claim 170, wherein spectral fluorescence data are collected for the bead array by initially forming a spatially encoded array of beads at an interface between an electrode and an electrolyte solution, comprising the following steps:

- H
- (a) providing an electrode and an electrolyte solution;
  - (b) providing multiple types of beads, each type being stored in accordance with chemically or physically distinguishable bead characteristics in one of a plurality of reservoirs, each reservoir containing a plurality of like-type beads suspended in said electrolyte solution;
  - (c) providing said reservoirs in the form of an *m* $\times$ *n* grid arrangement;
  - (d) patterning said electrode to define *m* $\times$ *n* compartments corresponding to said *m* $\times$ *n* grid of reservoirs;
  - (e) depositing *m* $\times$ *n* droplets from said *m* $\times$ *n* reservoirs onto said corresponding *m* $\times$ *n* compartments, each said droplet originating from one of said reservoirs and remaining confined to one of said *m* $\times$ *n* compartments and each said droplet containing at least one bead;
  - (f) positioning a top electrode above said droplets so as to simultaneously contact each said droplet;
  - (g) generating an electric field between said top electrode and said *m* $\times$ *n* droplets;
  - (h) using said electric field to form a bead array in each said *m* $\times$ *n* compartments, each said bead array remaining spatially confined to one of said *m* $\times$ *n* droplets;